STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION
PURCHASE AND CONTRACT DIVISION

7195-3E
MARCH 20, 1995
SUPERSEDES
7195-FWU-3D
JANUARY 27, 1988

SPECIFICATION FOR FURNITURE, WOOD, UPHOLSTERED

(THIS SPECIFICATION IS RELEASED FOR PROCUREMENT PURPOSES UNTIL REVISED OR RESCINDED.)

SCOPE

THIS SPECIFICATION COVERS MATERIAL AND CONSTRUCTION REQUIREMENTS FOR UPHOLSTERED WOOD SOFAS AND CHAIRS OF COMMERCIAL DESIGN. IT IS NOT INTENDED TO INCLUDE ALL VARIETIES OF UPHOLSTERED WOOD FURNITURE WHICH MAY BE COMMERCIALLY AVAILABLE, BUT IS INTENDED TO COVER ONLY THOSE GENERALLY USED BY STATE AGENCIES AND PUBLIC SCHOOLS.

I. CLASSIFICATION

FURNITURE COVERED UNDER THIS SPECIFICATION SHALL BE OF THE FOLLOWING TYPES:

TYPE 1 - TIGHT SEAT AND BACK

TYPE 2 - LOOSE CUSHION SEAT AND TIGHT BACK

TYPE 3 - LOOSE CUSHION SEAT AND ATTACHED PILLOW BACK

TYPE 4 - LOOSE CUSHION SEAT AND PILLOW BACK

TYPE 5 - LOOSE CUSHION SEAT AND RUBBER WEBBED BACK

II. APPLICABLE STANDARDS

THE FOLLOWING DOCUMENT IN EFFECT ON THE OPENING DATE OF INVITATION FOR BIDS FORMS A PART OF THIS SPECIFICATION:

ASTM STANDARDS - D-3574 - FLEXIBLE CELLULAR MATERIALS
- SLAB, BONDED, AND MOLDED URETHANE FOAMS
AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
1916 RACE STREET
PHILADELPHIA, PA 19103

III. REQUIREMENTS

A. MATERIALS

1. LUMBER

ALL LUMBER SHALL BE KILN DRIED TO A MOISTURE CONTENT OF 6-10 PERCENT AT THE TIME OF MACHINING.

A) UNLESS OTHERWISE SPECIFIED IN THE INVITATION FOR BIDS, ALL EXPOSED LUMBER SHALL BE OF A WOOD SPECIES CUSTOMARILY OFFERED BY THE MANUFACTURER. ALL EXPOSED WOOD COMPONENTS MUST BE CLEAR FACED CUTTINGS AND FREE OF STRUCTURAL OR VISUAL DEFECTS.

B) UNEXPOSED FRAME MEMBERS SHALL BE STRUCTURALLY SOUND, FREE OF ANY DEFECTS THAT WILL AFFECT THE STRUCTURAL INTEGRITY OF THE FURNITURE. SPECIE SHALL BE OF THOSE THAT ARE COMMERCIALLY ACCEPTABLE FOR THE PURPOSE USED.

C) ALL STEAM BENT PARTS SHALL BE OF A SPECIE PROVEN SUITABLE FOR BENDING. UNLESS OTHERWISE SPECIFIED IN THE INVITATION FOR BIDS, EXPOSED STEAM BENT PARTS MAY BE OF A SPECIE DIFFERENT FROM OTHER EXPOSED WOOD BUT HAVING SIMILAR GRAIN AND FINISHING CHARACTERISTICS. BENT PARTS SHALL BE PROPERLY DRIED AFTER BENDING AND BEFORE FINISH MACHINING.

2. DOWELS

DOWELS SHALL BE OF ASH, OAK, HICKORY, MAPLE, BIRCH, OR BEECH. ALL DOWELS SHALL BE SPIRALLY AND LONGITUDINALLY GROOVED AND HAVE BEVELED ENDS. DIAMETER OF DOWELS NOT TO BE LESS THAN 3/8" (9.5 MM). LENGTH OF DOWELL SHALL BE NOT LESS THAN 4 TIMES DIAMETER. WHERE PRACTICAL, 7/16" (11.1 MM) DOWELS ARE PREFERRED. MOISTURE CONTENT AT TIME OF ASSEMBLY NOT TO EXCEED 5 PERCENT.

3. CAMBRIC

CAMBRIC SHALL CONTAIN NOT LESS THAN 48 THREADS PER INCH (1.9 THREADS PER MM) IN THE WARP AND NOT LESS THAN 42 THREADS PER INCH (1.65 THREADS PER MM) IN THE FILLING. THE WEIGHT ON A 30" (762 MM) BASIS SHALL BE MINIMUM 3-1/2 OZ. PER LINEAR YARD (99.2G/LIN. M). THE CAMBRIC SHALL BE BLACK AND THE FACE SIDE SHALL BE GLAZED. OTHER BOTTOMING MATERIALS ACCEPTABLE IN INDUSTRY PRACTICE AND CONFORMING TO GENERAL FUNCTION REQUIREMENTS OF CAMBRIC MAY BE USED.

4. WEBBING

A) SHEET WEBBING

BURLAP, WOVEN AND NON-WOVEN POLYPROPOLENE AND OTHER SYNTHETIC MATERIALS MAY BE USED. BURLAP, WHEN USED SHALL BE MINIMUM 17 OZ. PER LINEAR YARD (527G PER LIN. M) FOR SEATS, AND 14 OZ./LIN. YARD (434G/LIN. M) FOR BACKS ON A 30" (762 MM) WIDTH BASIS. OTHER MATERIAL MUST BE ACCEPTABLE IN INDUSTRY PRACTICE AND EQUAL OR EXCEED STRENGTH OF BURLAP.

B) STRIP WEBBING FOR SEATS AND BACKS

JUTE WEBBING SHALL BE 3-1/2" WIDE (89 MM), UNIFORMLY WOVEN OF PURE JUTE 2-PLY FIBER YARN WITH SELVEDGE ON BOTH EDGES. WOVEN WEBBING SHALL HAVE NOT LESS THAN 16 ENDS AND 10 PICKS PER INCH (63 ENDS AND 39 PICKS/M). THE WEIGHT PER 72 YARDS (65.8 M) SHALL BE MINIMUM 8-1/2 LBS. (3.9 KG). THE BREAKING STRENGTH SHALL BE AT LEAST 590 LBS. (267.6 KG). OTHER STRIP WEBBING OF NYLON, POLYPROPOLENE OR OTHER SYNTHETICS OR COMPOSITION MAY BE USED PROVIDED IT HAS BEEN FOUND SATISFACTORY IN INDUSTRY PRACTICE AND MEETS THE FUNCTIONAL AND STRENGTH REQUIREMENTS.

C) RUBBER STRIP WEBBING

WEBBING HAVING A MAXIMUM ELONGATION OF APPROXIMATELY 45 PERCENT SHALL BE USED. STRIPPING FOR ALL SOFAS SHALL BE EITHER 2" (51 MM) OR 2-1/4" (57 MM) WIDTHS FOR BOTH SEAT AND BACK. STRIPPING FOR CHAIR SEATS SHALL EITHER 2" (51 MM) OR 2-1/4" (57 MM) WIDTHS. CHAIR BACKS AND ARMREST STRIPPINGS SHALL BE EITHER 3/4" (19 MM), 1-1/8" (29 MM), 2" (51 MM), OR 2-1/4" (57 MM) WIDTHS BUT ONLY ONE WIDTH TO BE USED IN ANY ONE CONSTRUCTION.

D) STEEL STRIP WEBBING

SHALL BE OF THE TYPE MADE FROM HIGH-CARBON, OIL-TEMPERED STEEL, WITH FABRICATED INTEGRAL STEEL LOOPS. IT SHALL BE INSULATED AND HAVE A PROTECTIVE COATING.

E) ONE PIECE RUBBER DECK

DECK RUBBER SHEET SHALL BE OF ADEQUATE STRENGTH AND DURABLE FOR SUPPORT OF THE SEAT DECK. EDGES SHALL HAVE REINFORCEMENTS FOR ATTACHING SUPPORTING HELICAL SPRINGS OR CLIPS. AN ADEQUATE NUMBER OF SPRINGS OR CLIPS OF SUFFICIENT STRENGTH FOR SUPPORT SHALL BE USED. FASTENING OF SPRINGS OR CLIPS SHALL BE IN A MANNER GIVING LASTING DURABILITY.

F) MESH DECK

DECK SHALL BE CONSTRUCTED OF STEEL WIRE MESH COATED WITH VINYL OR OTHER INSULATING COMPOSITION MATERIAL. MESH SIZE SHALL BE APPROXIMATELY 1" X 4". ATTACHMENT SHALL BE BY SPECIAL CLIPS AND/OR HELICAL SPRINGS. THE ASSEMBLY SHALL BE OF ADEQUATE STRENGTH FOR DURABLE SUPPORT.

5. COTTON FELT

THE COTTON FELT TO BE EQUAL IN QUALITY TO A BLEND OF 35 PERCENT WESTERN FIRST-CUT LINTERS AND NOT LESS THAN 65 PERCENT NEW WHITE STAPLES. IT SHALL BE THOROUGHLY CLEANED AND MADE OF UNBROKEN LAMINATED SHEETS, WEIGHING NOT LESS THAN 12 OUNCES PER YARD (372.0 G PER LIN. M), 27" (686 MM) WIDTH BASIS. THE COTTON SHALL BE NEW (NOT PREVIOUSLY USED).

RESILIENT POLYESTER FIBER BATTING MAY BE USED. IT MUST GIVE COMFORT AND DURABILITY EQUAL TO COTTON.

6. TWINE

THE TWINE FOR TYING THE TOPS OF THE SPRINGS IN THE SEAT AND BACK SHALL BE SOFT AMERICAN HEMP, OR ITALIAN HEMP, OR FLAX WITH A STRAIGHT BREAKING STRENGTH OF NOT LESS THAN 260 POUNDS (117 KG) AND SHALL BE OF SIX (6) OR MORE PLIES. TWINE FOR SEWING SPRINGS TO THE FOUNDATION SHALL BE NYLON, HEMP, OR FLAX WITH A STRAIGHT BREAKING STRENGTH NOT LESS THAN 65 LBS. (29.2 KG). NYLON TUFTING TWINE SHALL BE USED FOR TYING BUTTONS. SYNTHETIC TWINES PROVEN SATISFACTORY FOR THE USE AND MEETING MINIMUM STRENGTH REQUIREMENTS MAY BE USED.

7. THREAD

ALL THREAD USED FOR SEWING FABRICS SHALL BE EITHER COTTON OR NYLON, POLYPROPOLENE OR OTHERS PROVEN COMPATIBLE WITH FABRIC. THE COLOR OF THE THREADS SHALL BE COORDINATED WITH THE COLOR AND PATTERN OF THE MATERIAL AND DESIGN OF THE FURNITURE. COLORED THREAD SHALL SHOW GOOD FASTNESS TO WET-DRY CLEANING, PERSPIRATION AND LIGHT.

8. EDGING

A) JUTE BOX EDGING

JUTE WOUND AROUND PAPER CORE AND COVERED WITH BURLAP SEWN TO PRESENT A TIGHT ENCLOSURE MAY BE USED. BURLAP SHALL WEIGH A MINIMUM OF 7 OUNCES PER SQ. YARD (237 G/M2). MINIMUM DIAMETER FOR EDGING USED ON SEATS SHALL BE 1" (25.4 MM).

B) URETHANE FOAM EDGING

URETHANE FOAM FOR EDGING SHALL CONFORM TO REQUIREMENTS IN ITEM 9, URETHANE FOAM.

C) EXTRUDED EDGING

CLOSED CELL EXTRUDED EDGING OF NEOPRENE OR OTHER SUITABLE PROVEN MATERIAL MAY BE USED.

D) WOOD CORE EDGING

TEARDROP SHAPED WOOD STRIPS MAY BE USED FOR CORES ON HARD EDGE CONSTRUCTION.

9. POLYURETHANE FOAM

THE POLYURETHANE FOAM SHALL BE A FLEXIBLE POLYURETHANE MATERIAL SUITABLE FOR USE AS FURNITURE CUSHIONING. IT SHALL BE MANUFACTURED FROM PURE POLYESTER TYPE POLYURETHANE WITHOUT THE ADDITION OF FILLERS OR PIGMENTS. THE FOAM SHALL BE OF OPEN CELL STRUCTURE, 100 PERCENT NEW MATERIAL AND SHALL BE SUCH THAT ODORS AND ABSORBED MATERIALS FROM ALCOHOL, BODY FLUIDS AND OTHER SUBSTANCES SHALL BE READILY REMOVED BY WASHING WITH SOAP AND MILD DETERGENTS WITHOUT INJURY TO THE URETHANE FOAM.

POLYURETHANE FOAM SHALL BE TESTED IN ACCORDANCE WITH ASTM D-3574, AND SHALL CONFORM TO THE FOLLOWING MINIMUM STANDARD.

A) DENSITY

THE PROCEDURE AS OUTLINED SHALL BE FOLLOWED TO DETERMINE THE DENSITY. THE MINIMUM DENSITY SHALL BE 1.5 LBS./CU.FT. FOR SEATING APPLICATIONS. THE MINIMUM DENSITY FOR PILLOWS, BACKS AND MISCELLANEOUS PADDING SHALL BE 1.2 LBS./CU.FT.

10. HAIR

CURLED OR RUBBERIZED HAIR MAY BE USED FOR FILLER. WHEN HAIR OF THE RUBBERIZED PADDED TYPE IS USED, PAD SHALL WEIGH NOT LESS THAN 4 OZS. (1.2 KG/M2) PER SQUARE FOOT AND SHALL BE AT LEAST 1-1/2" (38 MM) IN THICKNESS, EXCEPT WHEN USED FOR PADDING INSIDE OF ARM, THEN THE THICKNESS SHALL BE A MINIMUM OF 5/8" (15.9MM).

11. MUSLIN

MUSLIN SHALL BE UNBLEACHED AND SHALL CONTAIN NOT LESS THAN 56 THREADS PER INCH (2.2/MM) IN THE WARP AND 60 THREADS PER INCH (23/MM) IN THE FILLING. IT SHALL WEIGH NOT LESS THAN 3.6 OZ. PER SQ. YD. (122G/M2).

12. DENIM

DENIM FOR SEAT PLATFORM COVERING SHALL WEIGH AT LEAST 3-1/2 OZ. PER LINEAR YARD (108.5 G PER LINEAR M), ON A 30" WIDTH (762 MM) BASIS.

13. BURLAP

BURLAP WHEN USED FOR COVERING OVER SPRINGS SHALL BE AT LEAST 10 OZ. PER LINEAR YARD (305 G PER LINEAR M), 40" WIDTH BASIS (1.02 M).

14. SYNTHETIC FABRICS

VARIOUS SYNTHETIC FABRICS, BOTH WOVEN AND NON-WOVEN OF POLYESTER POLYPROPOLENE, VINYL, POLYESTER OR OTHERS MAY BE USED IN LIEU OF MUSLIN, BURLAP, OR DENIM WHERE APPLICABLE. SUCH SUBSTITUTE MATERIALS SHALL BE PROVEN AS ACCEPTABLE IN INDUSTRY PRACTICE AND SHALL MEET OR EXCEED THE STRENGTH REQUIREMENTS OF THE INTENDED USE.

15. INSULATOR PADS

ANY OF THE FOLLOWING INSULATOR PADS ARE ACCEPTABLE PROVIDED THOSE NOT WOVEN INTO BURLAP OR OTHER FABRIC SHALL BE COVERED WITH PROVEN SATISFACTORY FABRIC.

A) WIRE AND ROPE

WITH 19 OR 20 GAUGE HIGH CARBON, OIL TEMPERED WIRE, PIERCED THROUGH 0.185 (4.7 MM) DIAMETER PAPER OR SYNTHETIC ROPE REINFORCED WITH THREE (3) STRANDS OF JUTE OR SYNTHETIC CORD IN THE CENTER AND WRAPPED AROUND A SIDE ROPE OF 0.150 (3.8 MM) DIAMETER TWISTED PAPER OR SYNTHETIC ROPE.

B) WIRE AND ROPE PAD WITH TACKING STRIPS

SIMILAR TO ABOVE WIRE AND ROPE PAD WITH 7-1/2 OZ. (254 G) BURLAP TACKING STRIP ADDED TO ONE OR BOTH SIDES.

16. UPHOLSTERY NAILS

UPHOLSTERY NAILS FOR OUTSIDE TRIM SHALL BE CONVEX HEAD, BRASS OR BRASS HEAD WITH STEEL SHANK, WITH HEADS A MINIMUM OF 3/8" (9.5 MM) DIAMETER, AND SET THROUGHOUT NOT MORE THAN 1" (25.4 MM) APART. PLATED BRASS NAILS SHALL NOT BE ACCEPTABLE. ALL UPHOLSTERY NAILS SHALL BE CAREFULLY ATTACHED SO THAT NO MARRING OF THE COVER RESULTS AND THAT A STRAIGHT ALIGNMENT IS MAINTAINED.

17. TACKS

TACKS FOR SECURING WEBBING SHALL BE NO. 12 UPHOLSTERER'S TACKS. TACKS FOR SECURING UPHOLSTERY TO FRAME SHALL BE CUT TACKS OF A SUITABLE SIZE FOR THE PARTICULAR APPLICATION. ALL TACKS SHALL BE OF "BLUED" STEEL.

18. STAPLES

ALL STAPLES SHALL BE OF STEEL, COPPER LACQUER OR ZINC-COATED AND SHALL BE PROPERLY DRIVEN. STAPLES OF APPROPRIATE SIZE PROPERLY DRIVEN MAY BE USED IN LIEU OF TACKS WHERE APPLICABLE.

19. BOLTS AND SCREWS

BOLTS AND SCREWS SHALL BE OF A GOOD COMMERCIAL QUALITY.

20. SPRINGS

SPRING SEATS AND BACKS SHALL BE EITHER DOUBLE-CONE COILS, SINGLE CONE DROP-IN SPRING UNITS, SINUOUS TYPE SPRINGS, SINGLE-CONE BAR SPRING UNITS, OR MARSHALL UNITS DEPENDING ON TYPE AND DESIGN OF CONSTRUCTION. ALL SPRINGS SHALL BE MADE OF TEMPERED HIGH CARBON STEEL WIRE (UPHOLSTERY GRADE) AND SHALL HAVE EITHER A BAKED ON COAT OF BLACK ENAMEL OVER THE ENTIRE SURFACE, ZINC OR CADMIUM COATED.

NOTE: ALL WIRE GAUGES ARE U. S. STEEL WIRE (W&M).

A) DOUBLE-CONE COILS

DOUBLE-CONE COILS USED IN SEAT CONSTRUCTION SHALL BE 9 TO 11 GAUGE. DOUBLE-CONE COILS USED IN BACK CONSTRUCTION SHALL BE FROM 9-1/2 TO 14 GAUGE. IN THE BACK CONSTRUCTION EACH SPRING IN ONE ROW SHALL BE CONSISTENT IN EVERY RESPECT TO ALL SPRINGS IN THE SAME ROW. A ROW SHALL BE DEFINED AS THE CONTINUED LINE OF SPRINGS IN A HORIZONTAL DIRECTION. THE TOP END OF EACH SPRING SHALL BE BENT DOWNWARD AND THE BOTTOM END SHALL BE BENT UPWARD TO PREVENT ROTATION. DIAMETER, HEIGHT, AND TURNS IN THE COILS USED SHALL BE MANUFACTURER'S SPECIFICATIONS FOR SIZE AND DIMENSIONS AND FIRMNESS OF UNIT REQUIRED.

B) SINUOUS TYPE SPRINGS

SINUOUS TYPE SPRINGS USED IN SEAT CONSTRUCTION SHALL BE 9 GAUGE OR HEAVIER. FOR BACK CONSTRUCTION THE RANGE SHALL BE FROM 11 GAUGE OR LIGHTER, DEPENDING UPON HEIGHT OF BACK. IN NO INSTANCE SHALL THE GAUGE VARY IN ANY ONE CONSTRUCTION. THE NUMBER OF LOOPS OR TURNS PER SPECIFIED LENGTH SHALL BE IN ACCORDANCE WITH COMMERCIAL STANDARDS.

C) MARSHALL UNITS

WHEN MARSHALL UNITS ARE USED FOR BACKS, THE SPRINGS SHALL BE OF CYLINDRICAL TYPE, FORMED OF MINIMUM 15 GAUGE STEEL SPRING WIRE (MARSHALL-PACK GRADE) AND SHALL BE ZINC OR CADMIUM COATED. UNIT SHALL BE NOT LESS THAN 3" (76 MM) HIGH WHEN ENCASED AND SHALL HAVE AT LEAST 4-1/4 TURNS. SPRINGS SHALL BE INDIVIDUALLY ENCASED IN POCKETS OF MUSLIN AND THE SPRINGS SHALL BE HOG-RINGED TOGETHER AT EACH POINT OF CONTACT BETWEEN COILS AT TOP AND BOTTOM.

D) HELICAL SPRINGS

HELICAL SPRINGS SHALL BE USED TO TIE TOGETHER SINUOUS TYPE SPRINGS TO GIVE A COMPLETE SPRINGING ACTION.

SPRING EDGE CLIPS OR KRAFT INSULATED WIRE MAY BE USED IN LIEU OF HELICAL SPRINGS.

E) BORDER WIRE

BORDER WIRE SHALL BE 9 GAUGE (MINIMUM) FOR SEAT CONSTRUCTION AND 9-13 GAUGE FOR BACK CONSTRUCTION WHEN DOUBLE-CONE SPRINGS OR DROP-IN UNITS ARE USED. BORDER WIRE SHALL BE JOINED BY A STEEL TUBE (OR FERRULE) OF SUITABLE LENGTH AND GAUGE OF STEEL.

21. GLIDES

GLIDES SHALL BE CONSTRUCTED OF PLASTIC, NICKEL, OR CHROMEPLATED STEEL, OR OF CORROSION-RESISTING STEEL, AND SHALL BE OF THE MACHINE SCREW TYPE OR NAIL TYPE.

22. ADHESIVE

ALL ADHESIVES USED SHALL BE OF GOOD COMMERCIAL QUALITY AND SHALL BE USED WITHIN THE RECOMMENDED APPLICATIONS OF THE GLUE SUPPLIER. ALL ADHESIVES, THEIR USES AND GLUING PROCESSES SHALL BE IN KEEPING WITH ACCEPTED INDUSTRY PRACTICE.

B. DESIGN

THE DESIGN SHALL BE OF THE MANUFACTURER'S STANDARD FOR THE TYPE AND STYLE OF FURNITURE AS STATED IN THE INVITATION FOR BIDS.

C. CONSTRUCTION

1. FRAMES

ALL STRUCTURAL FRAME MEMBERS SHALL BE OF ADEQUATE SIZE AND STRENGTH TO GIVE STABILITY TO THE FRAME. LUMBER SHALL BE AS DESCRIBED IN MATERIALS SECTIONS. ALL JOINTS SHALL BE RIGID AND SECURE, FASTENED BY ACCEPTABLE METHODS, SECURELY GLUED AND REINFORCED WITH MECHANICAL FASTENERS AND/OR CLEATS OR BLOCKS WHERE NECESSARY PRACTICAL.

PLYWOOD "TRUSS" CONSTRUCTION AND OTHER SUBSTITUTE MATERIALS MAY BE USED WHEN APPROVED BY THE STANDARDS SECTION OF THE DIVISION OF PURCHASE AND CONTRACT.

2. WEBBING

THE MATERIAL FOR WEBBING SHALL BE AS SPECIFIED UNDER "MATERIALS", III. A. 4., ABOVE. JUTE-FIBER OR OTHER STRIP WEBBING TO BE CLOSELY INTERLACED TO INSURE RIGIDITY. BURLAP OR OTHER (SAGLESS) SHEET WEBBING FOR SEAT BASE SHALL BE REINFORCED BETWEEN EACH ROW OF SPRINGS BELOW THE WEBBING BY EITHER SINUOUS SPRINGS, SPRING-STEEL RODS OR SPRING-STEEL BANDS. ALL WEBBING, WHEN NOT FASTENED WITH SPRINGS OR CLIPS, SHALL BE TACKED, OR STAPLED REDOUBLED AND DOUBLE-TACKED TO RAILS. RUBBER RESILIENT WEBBING SHALL BE ATTACHED UNDER TENSION (MINIMUM 5 PERCENT OF ITS ORIGINAL LENGTH BY UPHOLSTERY TACKS, NAILS, STAPLES, OR STEEL CLIPS. STEEL WEBBING SHALL BE STRETCHED AND ANCHORED TO THE FRAME WITH FOUR 1" (25.4 MM) STEEL WEBBING NAILS PER STRIP.

3. SPRINGS

A) DOUBLE-CONE COILS

DIAMETER, HEIGHT AND TURNS IN THE COILS USED SHALL BE MANUFACTURER'S SPECIFICATIONS FOR SIZE DIMENSIONS AND FIRMNESS OF UNIT REQUIRED. SPRINGS SHALL NOT BE SPACED MORE THAN 3-1/2" (89 MM) APART. EACH SPRING IN THE SEAT SHALL BE SEWN AND TIED TO STRIP WEBBING OR SECURED TO SHEET WEBBING, BY INSULATED CLINCH-TYPE SPRING FASTENERS WITH POINTS TURNED BACK INTO THE WEBBING. FOR STEEL STRIP WEBBING, EACH COIL SHALL BE INSERTED INTO THE WEBBING. THE TOPS OF THE SPRINGS IN SEATS SHALL BE TIED AT LEAST EIGHT WAYS WITH TWINE. THE SPRINGS IN BACKS TO BE TIED AT LEAST FOUR PLACES. A BORDER WIRE SHALL BE PLACED AROUND THE PERIMETER OF THE SPRINGS WHERE NEEDED AND THEN SECURELY FASTENED TO EACH ADJACENT SPRING WITH AN INSULATED METAL CLAMP OR CLIP.

B) SINUOUS TYPE SPRINGS

SINUOUS TYPE SPRINGS SHALL BE ATTACHED TO THE FRAME BY EITHER INSULATED METAL CLIPS, INSERTING THE ENDS OF THE SPRINGS INTO PRE-DRILLED HOLES, OR BY THE USE OF STEEL STRIPS WITH ONE EDGE OF THE STRIP ROLLED OVER THE END LOOP OF EACH SPRING. THE MAXIMUM SPACING BETWEEN SINUOUS SPRINGS SHALL BE 4" (10.2 CM) ON CENTER. THE TOPS OF ALL SPRINGS SHALL BE JOINED TOGETHER, SIDE BY SIDE, BY NOT LESS THAN TWO ROWS OF HELICAL SPRINGS, SPRING CLIPS OR INSULATED WIRE. SIDE ROWS SHALL BE FASTENED IN LIKE MANNER TO RAILS.

C) MARSHALL UNIT BACK

MARSHALL UNITS USED IN BACKS SHALL BE ATTACHED TO FRAME BY TACKING WITH ONE 6 OZ. (170 G) TACK PER PERIMETER SPRING. EDGE WIRE SHALL BE ATTACHED TO EACH PERIMETER SPRING WITH 3/8" (9.5) LINED B-W CLIPS. SHEET WEBBING SHALL BE USED TO SUPPORT THE MARSHALL UNITS.

4. FILLING

SPRINGS IN THE SEAT AND BACK SHALL BE COVERED WITH A WIRE INSULATOR PAD AND FABRIC AS PREVIOUSLY SPECIFIED IN ITEMS 13, 14, AND 15, UNDER "MATERIALS". CURLED HAIR PADS, FELTED COTTON, URETHANE, FOAM RUBBER, POLYESTER FIBER OR COMBINATIONS MAY BE EVENLY DISTRIBUTED OVER THE WIRE INSULATOR PAD, AND THE PLATFORM OR DECK MATERIAL APPLIED. SEAT, ARM AND BACK EDGES SHALL HAVE AN EDGE ROLL SECURELY FASTENED TO THE EDGE WIRE WITH TWINE OR METAL CLIPS WHEN EDGE WIRES ARE USED.

5. LOOSE CUSHIONS

THE FINISHED SIZES OF ALL CUSHIONS SHALL BE SUCH THAT THEY WILL COMPLETELY COVER THE SEAT DECKS AND BACK RESTS; PROVIDE A SNUG FIT BETWEEN UPHOLSTERED ARMS AND BACKS, AND BETWEEN CUSHIONS WHEN MORE THAN ONE IS REQUIRED. ALL OUTSIDE EDGES OF THE CUSHIONS, WHEN IN PLACE, SHALL BE APPROXIMATELY FLUSH WITH THE FRONT EDGE OF THE UPHOLSTERED FRAME. EACH CUSHION SHALL BE COMPLETELY REVERSIBLE AND ITS COVER APPLIED OVER THE FILLING MATERIAL IN A SMOOTH AND CAREFULLY TAILORED MANNER. ALL CUSHIONS TO BE ZIPPER CLOSED. WHEN NON-BREATHABLE COVERS ARE USED, A SUITABLE MEANS OF VENTING MUST BE PROVIDED.

6. COVERING

COVERS SHALL BE APPLIED SO THAT THEY ARE SMOOTH AND EVEN. ALL WELT LINES SHALL BE TRUE. PANEL ENDS OF ARMS AND BACKS SHALL BE FASTENED IN SUCH A MANNER AS TO AVOID CUTTING OR PUNCTURING EXPOSED COVERING. COVERS SHALL BE BROUGHT BACK OVER THE FRONT EDGE OF THE SEAT DECK NOT LESS THAN 4" (100 MM), AND THE REMAINDER OF THE SEAT DECK SHALL BE COVERED WITH DECKING MATERIAL OF NEUTRAL SHADE. ALL FABRIC UPHOLSTERY, EXCEPT BIAS COVERING FOR WELTING, SHALL BE CUT AND APPLIED TO MAINTAIN THE VERTICAL DESIGN OF BACK AND FACE OF UNIT. FABRICS SHALL BE CENTERED AND MATCHED UP AND DOWN SO THAT THE UNIT, WHEN VIEWED FROM THE

FRONT, PRESENTS THE DESIGN OF THE FABRIC CENTERED AND RUNNING FROM TOP BORDER TO BOTTOM EDGE. TOP BORDER OF ARMS SHALL BE PAIRED IN DESIGN BUT NEED NOT MATCH OTHER DESIGN.

D. FINISH

ALL EXPOSED WOOD SURFACES SHALL BE THOROUGHLY MACHINED AND SANDPAPERED TO A TRUE, SMOOTH SURFACE. FINISH SHALL CONSIST OF NON-GRAIN-RAISING, LIGHT-FAST SOLVENT-TYPE STAIN, FILLER AND PROPER AMOUNT OF TONING, SEALER, AND LACQUER AND APPLIED ACCORDING TO MANUFACTURER'S PROCEDURE. STAIN AND FILLER SHALL NOT CLOUD THE GRAIN OF THE WOOD AND SUFFICIENT TIME SHALL BE ALLOWED FOR DRYING BETWEEN EACH COAT. THE COLOR AND APPEARANCE OF WOOD FINISHES FOR THE VARIETIES OF WOOD SPECIFIED SHALL BE CHECKED AGAINST MANUFACTURER'S STANDARD COLOR MATCH SAMPLE AT THE TIME OF PRODUCTION. COLOR SHALL LIE BETWEEN THE MANUFACTURER'S ACCEPTED LIMITS FOR THE FINISH BEING APPLIED. ALL MAJOR SURFACES SHALL BE RUBBED TO DESIRED SHEEN AND POLISHED CLEAN WITH A WAX RUBBING LUBRICANT.

E. WORKMANSHIP

THE FINISHED ARTICLE SHALL BE CLEAN AND FREE FROM ANY DEFECTS WHICH MAY AFFECT APPEARANCE AND SERVICEABILITY. ALL UPHOLSTERED COVERS SHALL BE SMOOTHLY AND EVENLY APPLIED AND CAREFULLY TAILORED. SEAMS SHALL BE PROPERLY ALIGNED AND THOROUGHLY STITCHED. COVERS SHALL BE CAREFULLY MATCHED AS TO PATTERN AND WEAVE OF FABRIC AS DESCRIBED IN COVERING SECTION EXCEPT WHERE DESIGN OR TREATMENT OF FABRICS DOES NOT REQUIRE CENTERING AND MATCHING.

F. FLAMMABILITY

UPHOLSTERED FURNITURE SUPPLIED UNDER THIS SPECIFICATION SHALL PROVIDE THE HIGHEST DEGREE OF FLAME RETARDANCE AFFORDED UNDER THE INDUSTRY VOLUNTARY FLAMMABILITY STANDARD AS RECOGNIZED BY THE UPHOLSTERED FURNITURE COUNCIL OR AS FURTHER SPECIFIED IN THE INVITATION FOR BIDS.

SELECTION OF MATERIALS SHALL BE MADE TO COMPLY WITH FLAMMABILITY REQUIREMENTS. WHERE APPLICABLE, EXCEPTIONS MAY BE MADE IN MATERIALS REQUIREMENTS IN ORDER TO COMPLY WITH THE FLAMMABILITY STANDARD.

IV. WARRANTY

THE CONTRACTOR WARRANTS TO THE OWNER THAT ALL FURNITURE FURNISHED UNDER THIS SPECIFICATION WILL BE NEW, OF GOOD MATERIAL AND WORKMANSHIP, AND AGREES TO REPLACE PROMPTLY ANY PART OR PARTS (EXCEPT UPHOLSTERY FABRICS), WHICH BY REASON OF DEFECTIVE MATERIAL OR WORKMANSHIP SHALL FAIL UNDER NORMAL USE, FREE OF NEGLIGENCE OR ACCIDENT FOR A PERIOD OF TWENTY-FOUR (24) MONTHS FROM DATE OF ACCEPTANCE. SUCH REPLACEMENT SHALL BE FREE OF ANY CHARGE TO THE OWNER OR HIS REPRESENTATIVE.

V. SERVICE, PARTS AND MANUALS

THIS SECTION IS NOT APPLICABLE TO THE COMMODITY COVERED BY THIS SPECIFICATION EXCEPT AS STATED IN THE INVITATION FOR BIDS.

VI. ACCEPTANCE INSPECTION AND TESTING

UNLESS OTHERWISE SPECIFIED IN THE INVITATION TO BID OR PURCHASE ORDER, THE MANUFACTURER SHALL BE RESPONSIBLE FOR THE PERFORMANCE OF ALL TEST REQUIREMENTS SPECIFIED HEREIN, AND FOR INSURING THAT COMPONENTS AND MATERIALS ARE AS SPECIFIED HEREIN.

THE STATE RESERVES THE RIGHT TO INSPECT THE MANUFACTURE AND ASSEMBLY OF FURNITURE WHERE SUCH INSPECTIONS ARE DEEMED NECESSARY TO ASSURE MATERIALS AND WORKMANSHIP CONFORM TO PRESCRIBED REQUIREMENTS.

VII. DELIVERY AND PAYMENT

DELIVERY OF AND PAYMENT FOR FURNITURE UNDER THIS SPECIFICATION SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE INVITATION FOR BIDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PACKING, PACKAGING, OR PROTECTION REQUIREDTO INSURE DELIVERY IN AN UNDAMAGED CONDITION.

VIII. ORDERING DATA

1. TITLE, NUMBER AND DATE OF THIS SPECIFICATION
2. MODEL, SERIES OR CATALOG NUMBER
3. NAME OF ITEM
4. TYPE CLASSIFICATION OF ITEM
5. GRADE, PATTERN AND COLOR OF UPHOLSTERY MATERIAL
6. SPECIES OF EXPOSED WOOD AND COLOR OF FINISH
7. OTHER ORDERING OPTIONS OFFERED IN CATALOG, PRICE LIST, OR BID PROPOSAL.

THIS SPECIFICATION SHALL, UNTIL REVISED OR RESCINDED, APPLY AS FAR AS PRACTICABLE, ALIKE IN TERMS AND EFFECT TO EVERY STATE PURCHASE OF THE COMMODITY DESCRIBED HEREIN; HOWEVER, MODIFICATIONS MAY BE MADE BY THE SECRETARY OF ADMINISTRATION.